## Simcoe Ex. L (Google's Proposed Redactions)

	_
LEXITAS	

		Page 18			Page 19
1	use RASTA?		1	will typically	go through RASTA.
2	A.	I couldn't speak to all product teams	2	Q.	Does Ariane identify launches that
3	for across a		3	include summar	ries of each launch?
4	Q.	What about for display advertising?	4	A.	Yes.
5	Α.	For within display ads, there are	5	Q.	Does each Ariane document also
6	some cases wher	e RASTA is not used for every launch.	6	contain links	to other documents and sources?
7	Q.	Is there something else used instead?	7		ATTORNEY McCALLUM: Object to form.
8	Ã.	For could you clarify if there is	8		The witness can answer.
9		for a particular purpose?	9	Α.	It may contain a variety of links
10	_	If RASTA is not used for a launch, is	10	within each ti	
11	~	imilar database that the Google team	11	Q.	Does it link to experimental results
12	uses?		12	contained in F	
13		Let's see. I think, first, I would	13	Α.	For the launches that use RASTA,
14		a tool rather than a database, but,	14	there would be	•
15		as a specific purpose of evaluating	15	0.	Are there any successor databases to
16	-	nges within the ad serving system.	16	RASTA?	ine didie an paddesser addasaes de
17		riety of other launches and a variety	17	Α.	Successor databases. Could you
18		erations that might be used when	18	clarify?	7-1
19		e launches, and so RASTA isn't always	19	0.	Are there any databases or tools that
20	appropriate as	•	20	~	later in time after RASTA that serve a
21		I think I understand.	21	similar purpos	
22	χ.	So is RASTA used to evaluate the	22	A.	No.
23		changes within the ad serving	23	0.	Is the same true for Ariane?
24	system?	changes wraim the ad serving	24	≅. <b>A.</b>	Ariane was replaced by the launch
25	-	Anything that's run as an experiment	25		similar functionality.
					, ,
		Page 20			Page 21
1					
	Q.	What is a launch tool called?	1	summary in des	scription.
2	~ .	What is a launch tool called? Launch.	<b>1</b> 2	summary in des	scription. In Ariane?
<b>2</b> 3	A.			_	<del>-</del>
	<b>A.</b> Q.	Launch.	2	Q.	In Ariane?
3	<b>A.</b> Q. <b>A.</b>	Launch. Launch?	2 <b>3</b>	Q. <b>A.</b> Q.	In Ariane? Yes.
3 <b>4</b>	A. Q. A. Q.	Launch. Launch? Yeah.	2 3 4	Q. <b>A.</b> Q.	In Ariane?  Yes.  Do Ariane and Launch contain
3 <b>4</b> 5	A. Q. A. Q. A.	Launch. Launch? Yeah. When was Launch introduced?	2 3 4 5	Q. A. Q. summaries of e	In Ariane? Yes. Do Ariane and Launch contain experimental results?
3 4 5 6	A. Q. A. Q. A.	Launch. Launch? Yeah. When was Launch introduced? I don't recall the specific timing, the last few years. I think roughly	2 3 4 5 6	Q. A. Q. summaries of e	In Ariane? Yes. Do Ariane and Launch contain experimental results? It may vary from launch to launch.
3 4 5 6 7	A. Q. A. Q. A. and say within 2020 or 2021, to	Launch. Launch? Yeah. When was Launch introduced? I don't recall the specific timing, the last few years. I think roughly	2 3 4 5 6 7	Q. A. Q. summaries of e	In Ariane? Yes.  Do Ariane and Launch contain experimental results?  It may vary from launch to launch. the specifics of the launch. Is Launch generally seen as an
3 4 5 6 7 8	A. Q. A. Q. A. and say within 2020 or 2021, t	Launch. Launch? Yeah. When was Launch introduced? I don't recall the specific timing, the last few years. I think roughly hereabouts.	2 3 4 5 6 7 8	Q. A. Q. summaries of e A. It depends on Q.	In Ariane? Yes.  Do Ariane and Launch contain experimental results?  It may vary from launch to launch. the specifics of the launch. Is Launch generally seen as an
3 <b>4</b> 5 <b>6 7 8</b> 9	A. Q. A. Q. A. and say within 2020 or 2021, t	Launch. Launch? Yeah. When was Launch introduced? I don't recall the specific timing, the last few years. I think roughly hereabouts. Why did Launch replace Ariane? I don't know the specifics for the	2 3 4 5 6 7 8 9	Q. A. Q. summaries of e A. It depends on Q.	In Ariane? Yes.  Do Ariane and Launch contain experimental results?  It may vary from launch to launch. the specifics of the launch. Is Launch generally seen as an ver Ariane?
3 4 5 6 7 8 9	A. Q. A. Q. A. and say within 2020 or 2021, to Q. A. rewrite of the	Launch. Launch? Yeah. When was Launch introduced? I don't recall the specific timing, the last few years. I think roughly hereabouts. Why did Launch replace Ariane? I don't know the specifics for the	2 3 4 5 6 7 8 9	Q. A. Q. summaries of e A. It depends on Q.	In Ariane? Yes.  Do Ariane and Launch contain experimental results?  It may vary from launch to launch. the specifics of the launch. Is Launch generally seen as an ver Ariane?  ATTORNEY McCALLUM: Object to form.
3 4 5 6 7 8 9 10	A. Q. A. Q. A. and say within 2020 or 2021, to Q. A. rewrite of the Q.	Launch. Launch? Yeah. When was Launch introduced? I don't recall the specific timing, the last few years. I think roughly hereabouts. Why did Launch replace Ariane? I don't know the specifics for the tool.	2 3 4 5 6 7 8 9 10	Q. A. Q. summaries of e A. It depends on Q. improvement ov	In Ariane?  Yes.  Do Ariane and Launch contain experimental results?  It may vary from launch to launch.  the specifics of the launch.  Is Launch generally seen as an ver Ariane?  ATTORNEY McCALLUM: Object to form.  The witness can answer.
3 4 5 6 7 8 9 10 11 12	A. Q. A. Q. A. and say within 2020 or 2021, to Q. A. rewrite of the	Launch. Launch? Yeah. When was Launch introduced? I don't recall the specific timing, the last few years. I think roughly hereabouts. Why did Launch replace Ariane? I don't know the specifics for the tool. How is Launch different from Ariane?	2 3 4 5 6 7 8 9 10 11 12	Q. A. Q. summaries of e A. It depends on Q. improvement ov	In Ariane? Yes.  Do Ariane and Launch contain experimental results? It may vary from launch to launch. the specifics of the launch. Is Launch generally seen as an ver Ariane? ATTORNEY McCALLUM: Object to form. The witness can answer. I don't really have a sense of the
3 4 5 6 7 8 9 10 11 12 13	A. Q. A. Q. A. and say within 2020 or 2021, to Q. A. rewrite of the Q.	Launch. Launch? Yeah. When was Launch introduced? I don't recall the specific timing, the last few years. I think roughly hereabouts. Why did Launch replace Ariane? I don't know the specifics for the tool. How is Launch different from Ariane? ATTORNEY McCALLUM: Object to form.	2 3 4 5 6 7 8 9 10 11 12 13	Q. A. Q. summaries of e A. It depends on Q. improvement ov A. company's comp	In Ariane? Yes.  Do Ariane and Launch contain experimental results?  It may vary from launch to launch. the specifics of the launch. Is Launch generally seen as an ver Ariane?  ATTORNEY McCALLUM: Object to form. The witness can answer. I don't really have a sense of the pany-wide sentiment.
3 4 5 6 7 8 9 10 11 12 13 14	A. Q. A. Q. A. and say within 2020 or 2021, to Q. A. rewrite of the Q.	Launch. Launch? Yeah. When was Launch introduced? I don't recall the specific timing, the last few years. I think roughly hereabouts. Why did Launch replace Ariane? I don't know the specifics for the tool. How is Launch different from Ariane? ATTORNEY McCALLUM: Object to form. The witness can answer.	2 3 4 5 6 7 8 9 10 11 12 13	Q. A. Q. summaries of e A. It depends on Q. improvement ov A. company's comp	In Ariane? Yes.  Do Ariane and Launch contain experimental results?  It may vary from launch to launch. the specifics of the launch. Is Launch generally seen as an ver Ariane?  ATTORNEY McCALLUM: Object to form. The witness can answer. I don't really have a sense of the cany-wide sentiment. I understand.
3 4 5 6 7 8 9 10 11 12 13 14	A. Q. A. Q. A. and say within 2020 or 2021, t Q. A. rewrite of the Q. A. differences in	Launch. Launch? Yeah. When was Launch introduced? I don't recall the specific timing, the last few years. I think roughly hereabouts. Why did Launch replace Ariane? I don't know the specifics for the tool. How is Launch different from Ariane? ATTORNEY McCALLUM: Object to form. The witness can answer. There is differences in UI,	2 3 4 5 6 7 8 9 10 11 12 13 14 15	Q. A. Q. summaries of e A. It depends on Q. improvement ov  A. company's comp	In Ariane? Yes.  Do Ariane and Launch contain experimental results?  It may vary from launch to launch. the specifics of the launch. Is Launch generally seen as an ver Ariane?  ATTORNEY McCALLUM: Object to form. The witness can answer. I don't really have a sense of the pany-wide sentiment. I understand. Do you like it better?
3 4 5 6 7 8 9 10 11 12 13 14 15	A. Q. A. Q. A. and say within 2020 or 2021, to Q. A. rewrite of the Q. A. differences in that there are	Launch. Launch? Yeah. When was Launch introduced? I don't recall the specific timing, the last few years. I think roughly hereabouts. Why did Launch replace Ariane? I don't know the specifics for the tool. How is Launch different from Ariane? ATTORNEY McCALLUM: Object to form. The witness can answer. There is differences in UI, the configurability, and I believe	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Q. A. Q. summaries of e A. It depends on Q. improvement ov  A. company's comp	In Ariane? Yes.  Do Ariane and Launch contain experimental results?  It may vary from launch to launch. the specifics of the launch. Is Launch generally seen as an ver Ariane?  ATTORNEY McCALLUM: Object to form. The witness can answer. I don't really have a sense of the pany-wide sentiment. I understand. Do you like it better? Do I like it better? It feels
3 4 5 6 7 8 9 10 11 12 13 14 15 16	A. Q. A. Q. A. and say within 2020 or 2021, to Q. A. rewrite of the Q. A. differences in that there are	Launch. Launch? Yeah. When was Launch introduced? I don't recall the specific timing, the last few years. I think roughly hereabouts. Why did Launch replace Ariane? I don't know the specifics for the tool. How is Launch different from Ariane? ATTORNEY McCALLUM: Object to form. The witness can answer. There is differences in UI, the configurability, and I believe abilities to have more more	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Q. A. Q. summaries of e A. It depends on Q. improvement ov  A. company's comp	In Ariane? Yes.  Do Ariane and Launch contain experimental results?  It may vary from launch to launch. the specifics of the launch. Is Launch generally seen as an ver Ariane?  ATTORNEY McCALLUM: Object to form. The witness can answer. I don't really have a sense of the pany-wide sentiment. I understand. Do you like it better? Do I like it better? It feels
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	A. Q. A. Q. A. and say within 2020 or 2021, to Q. A. rewrite of the Q.  A. differences in that there are standard polici Google level.	Launch. Launch? Yeah. When was Launch introduced? I don't recall the specific timing, the last few years. I think roughly hereabouts. Why did Launch replace Ariane? I don't know the specifics for the tool. How is Launch different from Ariane? ATTORNEY McCALLUM: Object to form. The witness can answer. There is differences in UI, the configurability, and I believe abilities to have more more	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Q. A. Q. summaries of e A. It depends on Q. improvement ov  A. company's comp Q. A. roughly equivalent equival	In Ariane? Yes.  Do Ariane and Launch contain experimental results?  It may vary from launch to launch. the specifics of the launch. Is Launch generally seen as an ver Ariane?  ATTORNEY McCALLUM: Object to form. The witness can answer. I don't really have a sense of the cany-wide sentiment. I understand. Do you like it better? Do I like it better? It feels alent to me from a functionality
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. Q. A. Q. A. and say within 2020 or 2021, t Q. A. rewrite of the Q.  A. differences in that there are standard polici Google level. Q.	Launch. Launch? Yeah. When was Launch introduced? I don't recall the specific timing, the last few years. I think roughly hereabouts. Why did Launch replace Ariane? I don't know the specifics for the tool. How is Launch different from Ariane? ATTORNEY McCALLUM: Object to form. The witness can answer. There is differences in UI, the configurability, and I believe abilities to have more more es and practices governed at the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	Q. A. Q. summaries of e A. It depends on Q. improvement ov  A. company's comp Q. A. roughly equivalent equival	In Ariane? Yes.  Do Ariane and Launch contain experimental results?  It may vary from launch to launch. the specifics of the launch. Is Launch generally seen as an ver Ariane?  ATTORNEY McCALLUM: Object to form. The witness can answer. I don't really have a sense of the cony-wide sentiment. I understand. Do you like it better? Do I like it better? It feels alent to me from a functionality
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	A. Q. A. Q. A. and say within 2020 or 2021, to Q. A. rewrite of the Q.  A. differences in that there are standard polici Google level. Q. A.	Launch. Launch? Yeah. When was Launch introduced? I don't recall the specific timing, the last few years. I think roughly hereabouts. Why did Launch replace Ariane? I don't know the specifics for the tool. How is Launch different from Ariane? ATTORNEY McCALLUM: Object to form. The witness can answer. There is differences in UI, the configurability, and I believe abilities to have more more es and practices governed at the What is UI?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Q. A. Q. summaries of e A. It depends on Q. improvement ov  A. company's comp Q.  A. roughly equival perspective. Q. Launch, where	In Ariane? Yes.  Do Ariane and Launch contain experimental results?  It may vary from launch to launch. the specifics of the launch. Is Launch generally seen as an ver Ariane?  ATTORNEY McCALLUM: Object to form. The witness can answer. I don't really have a sense of the cony-wide sentiment. I understand. Do you like it better? Do I like it better? It feels alent to me from a functionality
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. Q. A. Q. A. and say within 2020 or 2021, to Q. A. rewrite of the Q.  A. differences in that there are standard polici Google level. Q. A. Q.	Launch. Launch? Yeah. When was Launch introduced? I don't recall the specific timing, the last few years. I think roughly hereabouts. Why did Launch replace Ariane? I don't know the specifics for the tool. How is Launch different from Ariane? ATTORNEY McCALLUM: Object to form. The witness can answer. There is differences in UI, the configurability, and I believe abilities to have more more es and practices governed at the What is UI? User interface.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Q. A. Q. summaries of e A. It depends on Q. improvement ov  A. company's comp Q.  A. roughly equive perspective. Q. Launch, where write them?	In Ariane? Yes.  Do Ariane and Launch contain experimental results?  It may vary from launch to launch. the specifics of the launch. Is Launch generally seen as an ver Ariane?  ATTORNEY McCALLUM: Object to form. The witness can answer. I don't really have a sense of the cany-wide sentiment. I understand. Do you like it better? Do I like it better? It feels alent to me from a functionality  The summaries that are in Ariane or do they come from? Does somebody
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. Q. A. Q. A. and say within 2020 or 2021, to Q. A. rewrite of the Q.  A. differences in that there are standard polici Google level. Q. A. Q.	Launch. Launch? Yeah. When was Launch introduced? I don't recall the specific timing, the last few years. I think roughly hereabouts. Why did Launch replace Ariane? I don't know the specifics for the tool. How is Launch different from Ariane? ATTORNEY McCALLUM: Object to form. The witness can answer. There is differences in UI, the configurability, and I believe abilities to have more more es and practices governed at the What is UI? User interface. Do employees at Google use Ariane or	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q. A. Q. summaries of e A. It depends on Q. improvement ov  A. company's comp Q.  A. roughly equivalent of the company's comp perspective. Q. Launch, where write them? A.	In Ariane? Yes.  Do Ariane and Launch contain experimental results?  It may vary from launch to launch. the specifics of the launch. Is Launch generally seen as an ver Ariane?  ATTORNEY McCALLUM: Object to form. The witness can answer. I don't really have a sense of the cany-wide sentiment. I understand. Do you like it better? Do I like it better? It feels alent to me from a functionality  The summaries that are in Ariane or do they come from? Does somebody  Yes.

	Page 22		Page 23
1	ticket and the project owners.	1	A. It's possible that some of the
2	Q. Who uses the summaries?	2	artifacts provided would link to information.
3	A. The reviewers will use the summaries.	3	Q. Does RASTA run experiments on live
4	Q. What is the function of the summary	4	Web traffic?
5	beyond just the result of the experiment?	5	A. Yes.
6	A. It describes the change and provides	6	Q. Does RASTA pick samples from live Web
7	a record of the kinds of product changes that we're	7	traffic?
8	making.	8	A. Technically, it's a different
9	Q. Does RASTA show the quantitative	9	system experimentation system that does the
10	results of the experiments?	10	sampling, but conceptually, yes.
11	A. Yes, when available.	11	Q. What is the system that does the
12	(Stenographer clarification.)	12	sampling?
13	Q. Does RASTA show the quantitative	13	ATTORNEY McCALLUM: Objection.
14	results of the experiments?	14	Beyond the scope. That is topic 7C rather than 7D,
15	A. Yes, when available.	15	but the witness can answer.
16	Q. If I want to know why an experiment	16	A. It's an experiment framework. It's
17	was run, where would I look?	17	called the experiment framework.
18	ATTORNEY McCALLUM: Object to form.	18	Q. What is the function of the
19	The witness can answer.	19	experiment framework?
20	A. I think I couldn't really speculate	20	A. It manages the configuration around
21	as to the origination of all of the experiments in	21	changes and performs some of that random selection
22	terms of the motivations and why.	22	of different experiments.
23	Q. Might the summary show why an	23	Q. Are RASTA experiments randomized?
24	experiment was run?	24	A. Yes.
25	ATTORNEY McCALLUM: Object to form.	25	Q. Circling back, how would you find out
	Page 24	.	Dogo 2F
1			Page 25
1	what the motivation was for performing an	1	ensure the experiment accuracy?
2	what the motivation was for performing an experiment?	1 2	ensure the experiment accuracy?  ATTORNEY McCALLUM: Object as beyond
2 3	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.	1 2 3	ensure the experiment accuracy?  ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.
2 3 <b>4</b>	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for	1 2 3 <b>4</b>	ensure the experiment accuracy?  ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.
2 3 4 5	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for all experiments. There's hundreds to a thousand,	1 2 3 <b>4</b> 5	ensure the experiment accuracy?  ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.  Q. In the experiment framework?
2 3 4 5 6	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for all experiments. There's hundreds to a thousand, thousands of experiments that we run across display	1 2 3 <b>4</b> 5 <b>6</b>	ensure the experiment accuracy?  ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.  Q. In the experiment framework?  A. In the experiment framework, that
2 3 4 5 6 7	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for all experiments. There's hundreds to a thousand, thousands of experiments that we run across display ads.	1 2 3 4 5 6 7	ensure the experiment accuracy?  ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.  Q. In the experiment framework?  A. In the experiment framework, that also remains largely within the random traffic
2 3 4 5 6 7 8	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for all experiments. There's hundreds to a thousand, thousands of experiments that we run across display ads.  Q. Does Google try to design RASTA	1 2 3 4 5 6 7 8	ensure the experiment accuracy?  ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.  Q. In the experiment framework?  A. In the experiment framework, that also remains largely within the random traffic selection.
2 3 4 5 6 7 8	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for all experiments. There's hundreds to a thousand, thousands of experiments that we run across display ads.  Q. Does Google try to design RASTA experiments to be as accurate as possible in a	1 2 3 4 5 6 7 8 9	ensure the experiment accuracy?  ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.  Q. In the experiment framework?  A. In the experiment framework, that also remains largely within the random traffic selection.  Q. In each RASTA experiment, is the
2 3 4 5 6 7 8 9	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for all experiments. There's hundreds to a thousand, thousands of experiments that we run across display ads.  Q. Does Google try to design RASTA experiments to be as accurate as possible in a scientific method kind of way?	1 2 3 4 5 6 7 8 9 10	ensure the experiment accuracy?  ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.  Q. In the experiment framework?  A. In the experiment framework, that also remains largely within the random traffic selection.  Q. In each RASTA experiment, is the traffic that receives the experimental treatment
2 3 4 5 6 7 8 9 10 11	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for all experiments. There's hundreds to a thousand, thousands of experiments that we run across display ads.  Q. Does Google try to design RASTA experiments to be as accurate as possible in a scientific method kind of way?  ATTORNEY McCALLUM: Object to form.	1 2 3 4 5 6 7 8 9 10 11	ensure the experiment accuracy?  ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.  Q. In the experiment framework?  A. In the experiment framework, that also remains largely within the random traffic selection.  Q. In each RASTA experiment, is the traffic that receives the experimental treatment chosen randomly from the population that was
2 3 4 5 6 7 8 9 10 11 12	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for all experiments. There's hundreds to a thousand, thousands of experiments that we run across display ads.  Q. Does Google try to design RASTA experiments to be as accurate as possible in a scientific method kind of way?  ATTORNEY McCALLUM: Object to form.  A. We try to make sure that we have	1 2 3 4 5 6 7 8 9 10 11 12	ensure the experiment accuracy?  ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.  Q. In the experiment framework?  A. In the experiment framework, that also remains largely within the random traffic selection.  Q. In each RASTA experiment, is the traffic that receives the experimental treatment chosen randomly from the population that was eligible to participate in the experiment?
2 3 4 5 6 7 8 9 10 11 12 13	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for all experiments. There's hundreds to a thousand, thousands of experiments that we run across display ads.  Q. Does Google try to design RASTA experiments to be as accurate as possible in a scientific method kind of way?  ATTORNEY McCALLUM: Object to form.  A. We try to make sure that we have statistical confidence within the metrics and that	1 2 3 4 5 6 7 8 9 10 11 12 13	ensure the experiment accuracy?  ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.  Q. In the experiment framework?  A. In the experiment framework, that also remains largely within the random traffic selection.  Q. In each RASTA experiment, is the traffic that receives the experimental treatment chosen randomly from the population that was eligible to participate in the experiment?  ATTORNEY McCALLUM: Object as beyond
2 3 4 5 6 7 8 9 10 11 12 13 14	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for all experiments. There's hundreds to a thousand, thousands of experiments that we run across display ads.  Q. Does Google try to design RASTA experiments to be as accurate as possible in a scientific method kind of way?  ATTORNEY McCALLUM: Object to form.  A. We try to make sure that we have statistical confidence within the metrics and that there is sound data behind it.	1 2 3 4 5 6 7 8 9 10 11 12 13 14	ensure the experiment accuracy?  ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.  Q. In the experiment framework?  A. In the experiment framework, that also remains largely within the random traffic selection.  Q. In each RASTA experiment, is the traffic that receives the experimental treatment chosen randomly from the population that was eligible to participate in the experiment?  ATTORNEY McCALLUM: Object as beyond the scope of the deposition, but the witness can
2 3 4 5 6 7 8 9 10 11 12 13 14	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for all experiments. There's hundreds to a thousand, thousands of experiments that we run across display ads.  Q. Does Google try to design RASTA experiments to be as accurate as possible in a scientific method kind of way?  ATTORNEY McCALLUM: Object to form.  A. We try to make sure that we have statistical confidence within the metrics and that there is sound data behind it.  Q. What else does Google do to try to	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	ensure the experiment accuracy?  ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.  Q. In the experiment framework?  A. In the experiment framework, that also remains largely within the random traffic selection.  Q. In each RASTA experiment, is the traffic that receives the experimental treatment chosen randomly from the population that was eligible to participate in the experiment?  ATTORNEY McCALLUM: Object as beyond the scope of the deposition, but the witness can answer.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for all experiments. There's hundreds to a thousand, thousands of experiments that we run across display ads.  Q. Does Google try to design RASTA experiments to be as accurate as possible in a scientific method kind of way?  ATTORNEY McCALLUM: Object to form.  A. We try to make sure that we have statistical confidence within the metrics and that there is sound data behind it.  Q. What else does Google do to try to make sure that you have statistical confidence	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	ensure the experiment accuracy?  ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.  Q. In the experiment framework?  A. In the experiment framework, that also remains largely within the random traffic selection.  Q. In each RASTA experiment, is the traffic that receives the experimental treatment chosen randomly from the population that was eligible to participate in the experiment?  ATTORNEY McCALLUM: Object as beyond the scope of the deposition, but the witness can answer.  A. I didn't understand the difference
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for all experiments. There's hundreds to a thousand, thousands of experiments that we run across display ads.  Q. Does Google try to design RASTA experiments to be as accurate as possible in a scientific method kind of way?  ATTORNEY McCALLUM: Object to form.  A. We try to make sure that we have statistical confidence within the metrics and that there is sound data behind it.  Q. What else does Google do to try to make sure that you have statistical confidence behind the metrics?	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	ensure the experiment accuracy?  ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.  Q. In the experiment framework?  A. In the experiment framework, that also remains largely within the random traffic selection.  Q. In each RASTA experiment, is the traffic that receives the experimental treatment chosen randomly from the population that was eligible to participate in the experiment?  ATTORNEY McCALLUM: Object as beyond the scope of the deposition, but the witness can answer.  A. I didn't understand the difference between that and the question around traffic
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for all experiments. There's hundreds to a thousand, thousands of experiments that we run across display ads.  Q. Does Google try to design RASTA experiments to be as accurate as possible in a scientific method kind of way?  ATTORNEY McCALLUM: Object to form.  A. We try to make sure that we have statistical confidence within the metrics and that there is sound data behind it.  Q. What else does Google do to try to make sure that you have statistical confidence behind the metrics?  ATTORNEY McCALLUM: Object to form.	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	ensure the experiment accuracy?  ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.  Q. In the experiment framework?  A. In the experiment framework, that also remains largely within the random traffic selection.  Q. In each RASTA experiment, is the traffic that receives the experimental treatment chosen randomly from the population that was eligible to participate in the experiment?  ATTORNEY McCALLUM: Object as beyond the scope of the deposition, but the witness can answer.  A. I didn't understand the difference between that and the question around traffic selection being random.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for all experiments. There's hundreds to a thousand, thousands of experiments that we run across display ads.  Q. Does Google try to design RASTA experiments to be as accurate as possible in a scientific method kind of way?  ATTORNEY McCALLUM: Object to form.  A. We try to make sure that we have statistical confidence within the metrics and that there is sound data behind it.  Q. What else does Google do to try to make sure that you have statistical confidence behind the metrics?  ATTORNEY McCALLUM: Object to form.  A. I'm not sure I understand the intent	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	ensure the experiment accuracy?  ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.  Q. In the experiment framework?  A. In the experiment framework, that also remains largely within the random traffic selection.  Q. In each RASTA experiment, is the traffic that receives the experimental treatment chosen randomly from the population that was eligible to participate in the experiment?  ATTORNEY McCALLUM: Object as beyond the scope of the deposition, but the witness can answer.  A. I didn't understand the difference between that and the question around traffic selection being random.  Q. If your answer is the same, that's
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for all experiments. There's hundreds to a thousand, thousands of experiments that we run across display ads.  Q. Does Google try to design RASTA experiments to be as accurate as possible in a scientific method kind of way?  ATTORNEY McCALLUM: Object to form.  A. We try to make sure that we have statistical confidence within the metrics and that there is sound data behind it.  Q. What else does Google do to try to make sure that you have statistical confidence behind the metrics?  ATTORNEY McCALLUM: Object to form.  A. I'm not sure I understand the intent of the question beyond	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	ensure the experiment accuracy?  ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.  Q. In the experiment framework?  A. In the experiment framework, that also remains largely within the random traffic selection.  Q. In each RASTA experiment, is the traffic that receives the experimental treatment chosen randomly from the population that was eligible to participate in the experiment?  ATTORNEY McCALLUM: Object as beyond the scope of the deposition, but the witness can answer.  A. I didn't understand the difference between that and the question around traffic selection being random.  Q. If your answer is the same, that's okay.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for all experiments. There's hundreds to a thousand, thousands of experiments that we run across display ads.  Q. Does Google try to design RASTA experiments to be as accurate as possible in a scientific method kind of way?  ATTORNEY McCALLUM: Object to form.  A. We try to make sure that we have statistical confidence within the metrics and that there is sound data behind it.  Q. What else does Google do to try to make sure that you have statistical confidence behind the metrics?  ATTORNEY McCALLUM: Object to form.  A. I'm not sure I understand the intent of the question beyond  Q. You mentioned before that RASTA	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	ensure the experiment accuracy?  ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.  Q. In the experiment framework?  A. In the experiment framework, that also remains largely within the random traffic selection.  Q. In each RASTA experiment, is the traffic that receives the experimental treatment chosen randomly from the population that was eligible to participate in the experiment?  ATTORNEY McCALLUM: Object as beyond the scope of the deposition, but the witness can answer.  A. I didn't understand the difference between that and the question around traffic selection being random.  Q. If your answer is the same, that's okay.  A. Okay. I believe the answer is yes,
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for all experiments. There's hundreds to a thousand, thousands of experiments that we run across display ads.  Q. Does Google try to design RASTA experiments to be as accurate as possible in a scientific method kind of way?  ATTORNEY McCALLUM: Object to form.  A. We try to make sure that we have statistical confidence within the metrics and that there is sound data behind it.  Q. What else does Google do to try to make sure that you have statistical confidence behind the metrics?  ATTORNEY McCALLUM: Object to form.  A. I'm not sure I understand the intent of the question beyond  Q. You mentioned before that RASTA experiments are randomized?	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.  Q. In the experiment framework?  A. In the experiment framework, that also remains largely within the random traffic selection.  Q. In each RASTA experiment, is the traffic that receives the experimental treatment chosen randomly from the population that was eligible to participate in the experiment?  ATTORNEY McCALLUM: Object as beyond the scope of the deposition, but the witness can answer.  A. I didn't understand the difference between that and the question around traffic selection being random.  Q. If your answer is the same, that's okay.  A. Okay. I believe the answer is yes, that it's chosen randomly from the population.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for all experiments. There's hundreds to a thousand, thousands of experiments that we run across display ads.  Q. Does Google try to design RASTA experiments to be as accurate as possible in a scientific method kind of way?  ATTORNEY McCALLUM: Object to form.  A. We try to make sure that we have statistical confidence within the metrics and that there is sound data behind it.  Q. What else does Google do to try to make sure that you have statistical confidence behind the metrics?  ATTORNEY McCALLUM: Object to form.  A. I'm not sure I understand the intent of the question beyond  Q. You mentioned before that RASTA experiments are randomized?  A. Uh-huh.	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.  Q. In the experiment framework?  A. In the experiment framework, that also remains largely within the random traffic selection.  Q. In each RASTA experiment, is the traffic that receives the experimental treatment chosen randomly from the population that was eligible to participate in the experiment?  ATTORNEY McCALLUM: Object as beyond the scope of the deposition, but the witness can answer.  A. I didn't understand the difference between that and the question around traffic selection being random.  Q. If your answer is the same, that's okay.  A. Okay. I believe the answer is yes, that it's chosen randomly from the population.  Q. Are RASTA experiments blinded?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	what the motivation was for performing an experiment?  ATTORNEY McCALLUM: Object to form.  A. I couldn't speculate for or state for all experiments. There's hundreds to a thousand, thousands of experiments that we run across display ads.  Q. Does Google try to design RASTA experiments to be as accurate as possible in a scientific method kind of way?  ATTORNEY McCALLUM: Object to form.  A. We try to make sure that we have statistical confidence within the metrics and that there is sound data behind it.  Q. What else does Google do to try to make sure that you have statistical confidence behind the metrics?  ATTORNEY McCALLUM: Object to form.  A. I'm not sure I understand the intent of the question beyond  Q. You mentioned before that RASTA experiments are randomized?	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	ATTORNEY McCALLUM: Object as beyond the scope, but the witness can answer.  A. Not within RASTA.  Q. In the experiment framework?  A. In the experiment framework, that also remains largely within the random traffic selection.  Q. In each RASTA experiment, is the traffic that receives the experimental treatment chosen randomly from the population that was eligible to participate in the experiment?  ATTORNEY McCALLUM: Object as beyond the scope of the deposition, but the witness can answer.  A. I didn't understand the difference between that and the question around traffic selection being random.  Q. If your answer is the same, that's okay.  A. Okay. I believe the answer is yes, that it's chosen randomly from the population.

		Page 26		Page	27
1	witness can ar	nswer.	1	for a ramp-up stage.	
2	A.	I don't understand the term	2		
3	"blinded."	T don't dadepoded the total	3	transactions were significantly smaller, would it	
4	0.	Are experiment participants aware	4	impact its ability to run experiments?	
5	~	participating in an experiment?	5	ATTORNEY McCALLUM: Object to form.	
6	A.	No.	6	A. I'm not a statistician, so I wouldn	
7	0.	If experiment results were to show,	7	know about the impact of the statistical confidence	
8	~	that a publisher had received less	8	Q. What is an experimental unit?	с.
9	- '	<u>-</u>	9	A. I haven't heard the term before.	
10	publisher?	cicipated, does Google compensate the	10		
11	publisher:	ATTORNEY McCALLUM: Object to form.	11		
12	3	•	12	choose to run an experiment for a longer than	
13	A.	Yeah, that would be outside of the			
	policies and p		13		
14	Q.	What sizes are the experiment group	14		
15	in RASTA typic		15	why a decision-maker would want to run an experimen	nt
16	A.	It may vary depending on the stage of	16	longer.	
17	-	on. It frequently will ramp-up and	17	2	
18	start from les		18	A. Most likely if they wanted to see	
19		a, it may go up towards	19	more data, if there was inconclusive evidence from	ı
20	Q.	How long is the ramp-up period?	20	the period run so far.	
21		ATTORNEY McCALLUM: I'll object to	21		
22		questioning as going beyond the scope	22		or
23		testimony. These are questions going	23		
24	-	s 7B and C, but the witness can answer.	24		
25	A.	Many of the guidelines give around	25	confidence within results, that might be one reason	n
		Page 28		Page .	29
1	they may run i	Page 28 for a shorter period, that there is	1	Page attorney hansen:	29
1 2	they may run i	for a shorter period, that there is	1 2	BY ATTORNEY HANSEN:	29
		for a shorter period, that there is		BY ATTORNEY HANSEN:	29
2	nothing new to	for a shorter period, that there is blearn.	2	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.	29
<b>2</b> 3	nothing new to	for a shorter period, that there is be learn.  Is there something like a confidence	2 3	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.	
<b>2</b> 3 4	nothing new to Q. interval that	for a shorter period, that there is blearn.  Is there something like a confidence applies to experiments?	2 3 4	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.  ATTORNEY HANSEN: Tab two, please.	
2 3 4 5	Q. interval that	for a shorter period, that there is blearn.  Is there something like a confidence applies to experiments?  Yes.	2 3 4 5	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.  ATTORNEY HANSEN: Tab two, please.  CERTIFIED STENOGRAPHER: Number one BY ATTORNEY HANSEN:	
2 3 4 5 6	nothing new to Q. interval that A. Q. A.	for a shorter period, that there is bearn.  Is there something like a confidence applies to experiments?  Yes.  Can you describe it?	2 3 4 5 6	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.  ATTORNEY HANSEN: Tab two, please.  CERTIFIED STENOGRAPHER: Number one BY ATTORNEY HANSEN:	
2 3 4 5 6 7	nothing new to Q. interval that A. Q. A. that is service	for a shorter period, that there is a learn.  Is there something like a confidence applies to experiments?  Yes.  Can you describe it?  The confidence interval is something	2 3 4 5 6 7	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.  ATTORNEY HANSEN: Tab two, please.  CERTIFIED STENOGRAPHER: Number one BY ATTORNEY HANSEN:  Q. The document is being marked Hsueh	
2 3 4 5 6 7 8	nothing new to Q. interval that A. Q. A. that is service	for a shorter period, that there is a learn.  Is there something like a confidence applies to experiments?  Yes.  Can you describe it?  The confidence interval is something the confidence interval is something the confidence within the confidence within the	2 3 4 5 6 7 8	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.  ATTORNEY HANSEN: Tab two, please.  CERTIFIED STENOGRAPHER: Number one BY ATTORNEY HANSEN:  Q. The document is being marked Hsueh exhibit one.	
2 3 4 5 6 7 8 9	nothing new to Q. interval that A. Q. A. that is service statistical me	for a shorter period, that there is a learn.  Is there something like a confidence applies to experiments?  Yes.  Can you describe it?  The confidence interval is something the confidence interval is something the confidence within the confidence within the	2 3 4 5 6 7 8 9	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.  ATTORNEY HANSEN: Tab two, please.  CERTIFIED STENOGRAPHER: Number one BY ATTORNEY HANSEN:  Q. The document is being marked Hsueh exhibit one.  It begins on a page with a Bates	٠.
2 3 4 5 6 7 8 9	nothing new to Q. interval that A. Q. A. that is service statistical meresults that a	for a shorter period, that there is a learn.  Is there something like a confidence applies to experiments?  Yes.  Can you describe it?  The confidence interval is something the ced in RASTA, and it provides a leasure of our confidence within the lare shown.	2 3 4 5 6 7 8 9	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.  ATTORNEY HANSEN: Tab two, please.  CERTIFIED STENOGRAPHER: Number one BY ATTORNEY HANSEN:  Q. The document is being marked Hsueh exhibit one.  It begins on a page with a Bates number GOOG-DOJ-AT-02204351.  It's titled: Changes to Ad Manager	٠.
2 3 4 5 6 7 8 9 10	nothing new to  Q.  interval that  A.  Q.  A.  that is service statistical me results that a	for a shorter period, that there is a learn.  Is there something like a confidence applies to experiments?  Yes.  Can you describe it?  The confidence interval is something the confidence interval is something the confidence within the confid	2 3 4 5 6 7 8 9 10 11	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.  ATTORNEY HANSEN: Tab two, please.  CERTIFIED STENOGRAPHER: Number one BY ATTORNEY HANSEN:  Q. The document is being marked Hsueh exhibit one.  It begins on a page with a Bates number GOOG-DOJ-AT-02204351.	٠.
2 3 4 5 6 7 8 9 10 11	nothing new to Q. interval that A. Q. A. that is service statistical me results that a	for a shorter period, that there is a learn.  Is there something like a confidence applies to experiments?  Yes.  Can you describe it?  The confidence interval is something the direction of our confidence within the are shown.  Does it have a standard value?  I don't think I understand that, the indard value.	2 3 4 5 6 7 8 9 10 11 12	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.  ATTORNEY HANSEN: Tab two, please.  CERTIFIED STENOGRAPHER: Number one BY ATTORNEY HANSEN:  Q. The document is being marked Hsueh exhibit one.  It begins on a page with a Bates number GOOG-DOJ-AT-02204351.  It's titled: Changes to Ad Manager AdMob auction DVA Review, September 2019.  A. Just give me a moment to flip	٠.
2 3 4 5 6 7 8 9 10 11 12 13	nothing new to Q. interval that A. Q. A. that is service statistical meresults that a Q. A. question, star	for a shorter period, that there is a learn.  Is there something like a confidence applies to experiments?  Yes.  Can you describe it?  The confidence interval is something the confidence interval is something the confidence within the confid	2 3 4 5 6 7 8 9 10 11 12 13	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.  ATTORNEY HANSEN: Tab two, please.  CERTIFIED STENOGRAPHER: Number one BY ATTORNEY HANSEN:  Q. The document is being marked Hsueh exhibit one.  It begins on a page with a Bates number GOOG-DOJ-AT-02204351.  It's titled: Changes to Ad Manager AdMob auction DVA Review, September 2019.  A. Just give me a moment to flip	٠.
2 3 4 5 6 7 8 9 10 11 12 13 14	nothing new to Q. interval that A. Q. A. that is service statistical me results that a Q. A. question, star	for a shorter period, that there is a learn.  Is there something like a confidence applies to experiments?  Yes.  Can you describe it?  The confidence interval is something and in RASTA, and it provides a leasure of our confidence within the lare shown.  Does it have a standard value?  I don't think I understand that, the lard value.  My apologies.  Is there a standard confidence	2 3 4 5 6 7 8 9 10 11 12 <b>13</b>	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.  ATTORNEY HANSEN: Tab two, please.  CERTIFIED STENOGRAPHER: Number one BY ATTORNEY HANSEN:  Q. The document is being marked Hsueh exhibit one.  It begins on a page with a Bates number GOOG-DOJ-AT-02204351.  It's titled: Changes to Ad Manager AdMob auction DVA Review, September 2019.  A. Just give me a moment to flip through.  Q. Just please take a moment.	···
2 3 4 5 6 7 8 9 10 11 12 13	nothing new to Q. interval that A. Q. A. that is service statistical me results that a Q. A. question, star	for a shorter period, that there is a learn.  Is there something like a confidence applies to experiments?  Yes.  Can you describe it?  The confidence interval is something and in RASTA, and it provides a leasure of our confidence within the lare shown.  Does it have a standard value?  I don't think I understand that, the lard value.  My apologies.  Is there a standard confidence by Google for experiment?	2 3 4 5 6 7 8 9 10 11 12 13 14	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.  ATTORNEY HANSEN: Tab two, please.  CERTIFIED STENOGRAPHER: Number one BY ATTORNEY HANSEN:  Q. The document is being marked Hsueh exhibit one.  It begins on a page with a Bates number GOOG-DOJ-AT-02204351.  It's titled: Changes to Ad Manager AdMob auction DVA Review, September 2019.  A. Just give me a moment to flip through.  Q. Just please take a moment.  A. Should I continue flipping through?	···
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	nothing new to Q. interval that A. Q. A. that is service statistical meresults that a Q. A. question, star Q. interval used	for a shorter period, that there is a learn.  Is there something like a confidence applies to experiments?  Yes.  Can you describe it?  The confidence interval is something and in RASTA, and it provides a leasure of our confidence within the lare shown.  Does it have a standard value?  I don't think I understand that, the lard value.  My apologies.  Is there a standard confidence by Google for experiment?  Oh, I see.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.  ATTORNEY HANSEN: Tab two, please.  CERTIFIED STENOGRAPHER: Number one BY ATTORNEY HANSEN:  Q. The document is being marked Hsueh exhibit one.  It begins on a page with a Bates number GOOG-DOJ-AT-02204351.  It's titled: Changes to Ad Manager AdMob auction DVA Review, September 2019.  A. Just give me a moment to flip through.  Q. Just please take a moment.  A. Should I continue flipping through?  It's a pretty long document.	···
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	nothing new to  Q. interval that  A.  Q.  A. that is service statistical meresults that a  Q.  A. question, star  Q. interval used  A.	for a shorter period, that there is a learn.  Is there something like a confidence applies to experiments?  Yes.  Can you describe it?  The confidence interval is something and in RASTA, and it provides a leasure of our confidence within the lare shown.  Does it have a standard value?  I don't think I understand that, the lard value.  My apologies.  Is there a standard confidence by Google for experiment?  Oh, I see.  I, again, not being within the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.  ATTORNEY HANSEN: Tab two, please.  CERTIFIED STENOGRAPHER: Number one BY ATTORNEY HANSEN:  Q. The document is being marked Hsueh exhibit one.  It begins on a page with a Bates number GOOG-DOJ-AT-02204351.  It's titled: Changes to Ad Manager AdMob auction DVA Review, September 2019.  A. Just give me a moment to flip through.  Q. Just please take a moment.  A. Should I continue flipping through?  It's a pretty long document.  Q. It is pretty long.	···
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	nothing new to  Q. interval that  A.  Q. A. that is service statistical meresults that a  Q. A. question, star  Q. interval used A. statistician s	for a shorter period, that there is a learn.  Is there something like a confidence applies to experiments?  Yes.  Can you describe it?  The confidence interval is something the in RASTA, and it provides a leasure of our confidence within the lare shown.  Does it have a standard value?  I don't think I understand that, the lard value.  My apologies.  Is there a standard confidence by Google for experiment?  Oh, I see.  I, again, not being within the side, don't know about the details of	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.  ATTORNEY HANSEN: Tab two, please.  CERTIFIED STENOGRAPHER: Number one BY ATTORNEY HANSEN:  Q. The document is being marked Hsueh exhibit one.  It begins on a page with a Bates number GOOG-DOJ-AT-02204351.  It's titled: Changes to Ad Manager AdMob auction DVA Review, September 2019.  A. Just give me a moment to flip through.  Q. Just please take a moment.  A. Should I continue flipping through?  It's a pretty long document.  Q. It is pretty long.  All right. Have you generally	···
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	nothing new to  Q.  interval that  A.  Q.  A.  that is servic statistical me results that a  Q.  A.  question, stan Q.  interval used A.  statistician show that's imp	for a shorter period, that there is a learn.  Is there something like a confidence applies to experiments?  Yes.  Can you describe it?  The confidence interval is something the confidence interval is something the confidence within the confidence confidence.  I don't think I understand that, the confidence	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.  ATTORNEY HANSEN: Tab two, please.  CERTIFIED STENOGRAPHER: Number one BY ATTORNEY HANSEN:  Q. The document is being marked Hsueh exhibit one.  It begins on a page with a Bates number GOOG-DOJ-AT-02204351.  It's titled: Changes to Ad Manager AdMob auction DVA Review, September 2019.  A. Just give me a moment to flip through.  Q. Just please take a moment.  A. Should I continue flipping through? It's a pretty long document.  Q. It is pretty long.  All right. Have you generally familiarized yourself with the document?	···
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	nothing new to  Q. interval that  A.  Q. A. that is service statistical meresults that a  Q. A. question, star  Q. interval used A. statistician s	for a shorter period, that there is a learn.  Is there something like a confidence applies to experiments?  Yes.  Can you describe it?  The confidence interval is something and in RASTA, and it provides a leasure of our confidence within the lare shown.  Does it have a standard value?  I don't think I understand that, the lard value.  My apologies.  Is there a standard confidence by Google for experiment?  Oh, I see.  I, again, not being within the side, don't know about the details of plemented.  Great.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.  ATTORNEY HANSEN: Tab two, please.  CERTIFIED STENOGRAPHER: Number one BY ATTORNEY HANSEN:  Q. The document is being marked Hsueh exhibit one.  It begins on a page with a Bates number GOOG-DOJ-AT-02204351.  It's titled: Changes to Ad Manager AdMob auction DVA Review, September 2019.  A. Just give me a moment to flip through.  Q. Just please take a moment.  A. Should I continue flipping through? It's a pretty long document.  Q. It is pretty long.  All right. Have you generally familiarized yourself with the document?  A. Yes, through most of the major	···
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	nothing new to  Q. interval that  A.  Q. A. that is service statistical me results that a  Q. A. question, star Q. interval used A. statistician show that's imp	for a shorter period, that there is a learn.  Is there something like a confidence applies to experiments?  Yes.  Can you describe it?  The confidence interval is something and in RASTA, and it provides a leasure of our confidence within the lare shown.  Does it have a standard value?  I don't think I understand that, the lard value.  My apologies.  Is there a standard confidence by Google for experiment?  Oh, I see.  I, again, not being within the side, don't know about the details of plemented.  Great.  (Whereupon, document	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.  ATTORNEY HANSEN: Tab two, please.  CERTIFIED STENOGRAPHER: Number one BY ATTORNEY HANSEN:  Q. The document is being marked Hsueh exhibit one.  It begins on a page with a Bates number GOOG-DOJ-AT-02204351.  It's titled: Changes to Ad Manager AdMob auction DVA Review, September 2019.  A. Just give me a moment to flip through.  Q. Just please take a moment.  A. Should I continue flipping through?  It's a pretty long document.  Q. It is pretty long.  All right. Have you generally familiarized yourself with the document?  A. Yes, through most of the major sections.	···
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	nothing new to  Q. interval that  A.  Q. A. that is service statistical me results that a  Q. A. question, star  Q. interval used  A. statistician a how that's imp  Q. GOOG-DOJ-AT-02	for a shorter period, that there is a learn.  Is there something like a confidence applies to experiments?  Yes.  Can you describe it?  The confidence interval is something the in RASTA, and it provides a leasure of our confidence within the lare shown.  Does it have a standard value?  I don't think I understand that, the landard value.  My apologies.  Is there a standard confidence by Google for experiment?  Oh, I see.  I, again, not being within the side, don't know about the details of plemented.  Great.  (Whereupon, document 2204351 through 02204391, is received	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.  ATTORNEY HANSEN: Tab two, please.  CERTIFIED STENOGRAPHER: Number one BY ATTORNEY HANSEN:  Q. The document is being marked Hsueh exhibit one.  It begins on a page with a Bates number GOOG-DOJ-AT-02204351.  It's titled: Changes to Ad Manager AdMob auction DVA Review, September 2019.  A. Just give me a moment to flip through.  Q. Just please take a moment.  A. Should I continue flipping through?  It's a pretty long document.  Q. It is pretty long.  All right. Have you generally familiarized yourself with the document?  A. Yes, through most of the major sections.  Q. Do you recognize this document?	···
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	nothing new to  Q. interval that  A.  Q. A. that is service statistical me results that a  Q. A. question, star  Q. interval used  A. statistician a how that's imp  Q. GOOG-DOJ-AT-02	for a shorter period, that there is a learn.  Is there something like a confidence applies to experiments?  Yes.  Can you describe it?  The confidence interval is something and in RASTA, and it provides a leasure of our confidence within the lare shown.  Does it have a standard value?  I don't think I understand that, the lard value.  My apologies.  Is there a standard confidence by Google for experiment?  Oh, I see.  I, again, not being within the side, don't know about the details of plemented.  Great.  (Whereupon, document	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	BY ATTORNEY HANSEN:  Q. Now, I would like to hand you a document and ask you some questions about it.  ATTORNEY HANSEN: Tab two, please.  CERTIFIED STENOGRAPHER: Number one BY ATTORNEY HANSEN:  Q. The document is being marked Hsueh exhibit one.  It begins on a page with a Bates number GOOG-DOJ-AT-02204351.  It's titled: Changes to Ad Manager AdMob auction DVA Review, September 2019.  A. Just give me a moment to flip through.  Q. Just please take a moment.  A. Should I continue flipping through?  It's a pretty long document.  Q. It is pretty long.  All right. Have you generally familiarized yourself with the document?  A. Yes, through most of the major sections.  Q. Do you recognize this document?  A. I do not.	

		Page 30		Page 31
1	it is a true	and accurate copy?	1	Sinaniyev, and Jay, my boss.
2	A.	I do not, not having seen the	2	Q. I'd like to turn to the page that's
3	document befo	re.	3	titled: Agenda, on page ending 4352.
4	Q.	Great.	4	The green box says: Ask, approval to
5		What is DVA review? Are you familiar	5	complete about 100 percent sell-side transition to a
6	with it?		6	new auction model in two weeks.
7	A.	Yes. It is a review form for display	7	What does that mean?
8	and video ads	•	8	ATTORNEY McCALLUM: Object as beyond
9	Q.	What is its function?	9	the scope of topic 7D, but the witness can answer.
10	A.	It's to make decisions across the	10	A. Yeah, like I said, this is the first
11	display of vi	deo and app ads business.	11	time I'm seeing the document, and I wasn't
12	Q.	Who is on it?	12	intimately familiar with this project or review, so
13	A.	The it would typically be senior	13	not sure what the authors intended in terms of the
14	leadership am	ongst that organization.	14	decision.
15	Q.	Who would some of those people have	15	Q. Now, I'd like to turn to page ending
16	been in Septe	mber 2019?	16	4360. This slide is titled: Unified Pricing
17		ATTORNEY McCALLUM: Object to form as	17	Meaningfully Improves Inventory Access by Leveling
18	beyond the so	ope of topic 7D.	18	the Playing Field; is that correct?
19		The witness can answer.	19	ATTORNEY McCALLUM: Object to the
20	A.	Yeah, I think I wouldn't know this	20	form and object as beyond the scope of topic 7D.
21	don't recall	the specific individuals in 2019. It	21	The witness can answer.
22	typically wou	ld have been vice-presidents of	22	A. That appears to be the title of this
23	engineering a	nd product.	23	slide.
24	Q.	Who are those people today?	24	Q. This page is mostly occupied by a
25	A.	That would be Tim Craycroft, and Vlad	25	table, and I'd like to ask more about the table.
		Page 32		Page 33
1		What is the source of this material?	1	display advertising?
2		ATTORNEY McCALLUM: The same	2	A. I don't think I would be able to
3	objection.		3	determine that from this screenshot.
4		The witness can answer.	4	Q. Can you determine when the experiment
5	A.	Again, first time seeing this	5	was performed?
6	document. So	I don't really know, but it appears to	6	A. No, I cannot.
7	be a screensh	ot from RASTA.	7	Q. Can you determine how long the
8	Q.	In general, would RASTA look	8	experiment would have taken?
9	different if	viewed directly rather than viewing a	9	A. No.
10	screenshot?		10	Q. Can you determine what proportion of
11	A.	The UI here would be similar and the	11	traffic the experiment used?
12	types of info	rmation would be similar.	12	ATTORNEY McCALLUM: Could you clarify
13	Q.	Would this have captured the results	13	that question, counsel?
14	from RASTA ac	•	14	Q. What proportion of live Web traffic
15		ATTORNEY McCALLUM: Object to form.	15	this experiment used?
16	A.	I couldn't say without knowing how it	16	A. No, I couldn't determine that from
17	was produced.		17	the screenshot.
18	Q.	Does this table seem to show the	18	Q. If it was an experiment that occurred
19		experiment performed by Google?	19	within the standard guidelines you described
20	Α.	Yes, it appears so.	20	earlier, how long would it have taken?
21	Q.	Did the experiment use live Web	21	ATTORNEY McCALLUM: Object to form.
22	traffic?		22	A. Yeah, I couldn't really speculate for
23	Α.	I I couldn't say, but I would	23	the experiment, but again, generally, we would run
24	expect so.	Man the scale to SS' a seal of the seal	24	for one to two weeks.
25	Q.	Was the web traffic only for open Web	25	Q. And in general, what proportion of

	Page 70		Page 71
1	than I'm familiar with.	1	respect to plaintiff's assertions that any other
2	Q. Okay. I have no further questions	2	Google witnesses were insufficiently prepared.
3	about this document. Thanks.	3	ATTORNEY HANSEN: Okay. Off the
4	ATTORNEY HANSEN: Sorry, that was	4	record, please.
5	kind of fast.	5	THE VIDEOGRAPHER: All right. If
6	Okay. That concludes my questioning	6	that is everything, off the record on November 15,
7	today. Thank you very much, Mr. Hsueh.	7	2023 at 12:35.
8	Counsel, for the record, the U.S. has	8	(Time noted: 12:35 p.m.)
9	held other portions of the 30(b)(6) deposition open	10	
10	based on the lack of preparation of the designated	10	JASON HSUEH
11	witnesses. We intend to use the balance of the time	11	01201/12021
12	and may use additional time as the Court permits to	12	Subscribed and sworn to before me
13	remedy that deficiency. For the record, the U.S.	13	this day of 2023.
14	has	14	
15	THE VIDEOGRAPHER: We're at one hour	15	
16	38, so		
17	ATTORNEY HANSEN: The U.S. has 26	16	Notary Public
18	minutes on the record.	17	My Commission Expires:
19	ATTORNEY McCALLUM: And just for	18	
20		19	/
21	clarity, can I ask counsel, are you contending that this witness was insufficiently prepared as a	20	
22		21	
23	corporate representative?	22	
24	ATTORNEY HANSEN: No, sir, I'm not. ATTORNEY McCALLUM: Okay. And we	23	
25	obviously disagree and reserve all rights with	24	
43	obviously disagree and reserve all rights with	25	
	Page 72		Page 73
1	$\label{eq:page 72} \text{$\tt I$ wish to make the following changes, for the}$	1	Page 73
1 2	· · · · · · · · · · · · · · · · · · ·	1 2	•
	I wish to make the following changes, for the		PAGE LINE
2	I wish to make the following changes, for the following reasons:	2	PAGE LINE CHANGE:
2	I wish to make the following changes, for the following reasons:  PAGE LINE	2	PAGE LINE  CHANGE:  REASON:
2 3 4	I wish to make the following changes, for the following reasons:  PAGE LINE CHANGE:	2 3 4	PAGE LINE CHANGE: CHANGE:
2 3 4 5	I wish to make the following changes, for the following reasons:  PAGE LINE  CHANGE:  REASON:	2 3 4 5	PAGE LINE  CHANGE:  REASON:  CHANGE:  REASON:
2 3 4 5 6 7 8	I wish to make the following changes, for the following reasons:  PAGE LINE  CHANGE:  REASON:  CHANGE:	2 3 4 5 6 7 8	PAGE LINE  CHANGE:  CHANGE:  CHANGE:  CHANGE:
2 3 4 5 6 7 8	I wish to make the following changes, for the following reasons:  PAGE LINE  CHANGE:  REASON:  CHANGE:  REASON:  CHANGE:  REASON:  REASON:  CHANGE:  REASON:	2 3 4 5 6 7 8	PAGE LINE  CHANGE:  REASON:  CHANGE:  REASON:  CHANGE:  CHANGE:  REASON:  REASON:  CHANGE:  REASON:
2 3 4 5 6 7 8 9	I wish to make the following changes, for the following reasons:  PAGE LINE  CHANGE:  REASON:  CHANGE:  REASON:  CHANGE:  REASON:  CHANGE:  CHANGE:  CHANGE:  CHANGE:	2 3 4 5 6 7 8 9	PAGE LINE  CHANGE:  REASON:  CHANGE:  REASON:  CHANGE:  REASON:  CHANGE:  REASON:  CHANGE:  CHANGE:  CHANGE:  CHANGE:  CHANGE:  CHANGE:  CHANGE:
2 3 4 5 6 7 8 9 10	I wish to make the following changes, for the following reasons:  PAGE LINE  CHANGE:  REASON:  REASON:  CHANGE:  REASON:  CHANGE:  REASON:  REASON:  REASON:  REASON:  REASON:  REASON:	2 3 4 5 6 7 8 9 10	PAGE LINE  CHANGE:  REASON:  CHANGE:  REASON:  CHANGE:  REASON:  CHANGE:  REASON:  CHANGE:  REASON:  REASON:  REASON:
2 3 4 5 6 7 8 9 10 11	I wish to make the following changes, for the following reasons:  PAGE LINE  CHANGE:  REASON:  CHANGE:  REASON:  CHANGE:  REASON:  CHANGE:  REASON:  CHANGE:  CHANGE:  CHANGE:  CHANGE:  CHANGE:  CHANGE:	2 3 4 5 6 7 8 9 10 11	PAGE LINE  CHANGE:  REASON:  CHANGE:  REASON:  CHANGE:  REASON:  CHANGE:  REASON:  CHANGE:  REASON:  CHANGE:  CHANGE:  REASON:  CHANGE:  CHANGE:  CHANGE:  CHANGE:
2 3 4 5 6 7 8 9 10 11 12	I wish to make the following changes, for the following reasons:  PAGE LINE  CHANGE:  REASON:	2 3 4 5 6 7 8 9 10 11 12	PAGE LINE  CHANGE:  REASON:
2 3 4 5 6 7 8 9 10 11 12 13	I wish to make the following changes, for the following reasons:  PAGE LINE  CHANGE:  REASON:  CHANGE:  CHANGE:  CHANGE:  CHANGE:  CHANGE:  CHANGE:  CHANGE:	2 3 4 5 6 7 8 9 10 11 12 13	PAGE LINE  CHANGE:  REASON:  CHANGE:
2 3 4 5 6 7 8 9 10 11 12 13 14	I wish to make the following changes, for the following reasons:  PAGE LINE  CHANGE:  REASON:  REASON:  CHANGE:  REASON:  CHANGE:  REASON:  CHANGE:  REASON:  CHANGE:  REASON:  CHANGE:  REASON:  REASON:  CHANGE:  REASON:  REASON:  CHANGE:  REASON:  REASON:  REASON:	2 3 4 5 6 7 8 9 10 11 12 13 14	PAGE LINE  CHANGE:  REASON:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	I wish to make the following changes, for the following reasons:  PAGE LINE  CHANGE:  REASON:  CHANGE:  CHANGE:  REASON:  CHANGE:  CHANGE:	2 3 4 5 6 7 8 9 10 11 12 13 14 15	PAGE LINE  CHANGE:  REASON:  CHANGE:  CHANGE:  CHANGE:  CHANGE:  CHANGE:  CHANGE:  CHANGE:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	I wish to make the following changes, for the following reasons:  PAGE LINE  CHANGE:  REASON:  REASON:  CHANGE:  REASON:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	PAGE LINE  CHANGE:  REASON:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	I wish to make the following changes, for the following reasons:  PAGE LINE  CHANGE:  REASON:  CHANGE:  CHANGE:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	PAGE LINE  CHANGE:  REASON:  CHANGE:  CHANGE:  REASON:  CHANGE:  CHANGE:  CHANGE:  CHANGE:  CHANGE:  CHANGE:  CHANGE:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	I wish to make the following changes, for the following reasons:  PAGE LINE  CHANGE:  REASON:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	PAGE LINE  CHANGE:  REASON:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	I wish to make the following changes, for the following reasons:  PAGE LINE  CHANGE:  REASON:  CHANGE:  CHANGE:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	PAGE LINE  CHANGE:  REASON:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	I wish to make the following changes, for the following reasons:  PAGE LINE  CHANGE:  REASON:  CHANGE:  REASON:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	PAGE LINE  CHANGE:  REASON:  CHANGE:  CHANGE:  REASON:  CHANGE:  CHANGE:  CHANGE:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	I wish to make the following changes, for the following reasons:  PAGE LINE  CHANGE:  REASON:  CHANGE:  REASON:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	PAGE LINE  CHANGE:  REASON:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	I wish to make the following changes, for the following reasons:  PAGE LINE  CHANGE:  REASON:  CHANGE:  REASON:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	PAGE LINE  CHANGE:  REASON:  CHANGE:  CHANGE:  REASON:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	I wish to make the following changes, for the following reasons:  PAGE LINE  CHANGE:  REASON:  CHANGE:  REASON:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	PAGE LINE  CHANGE:  REASON:  CHANGE:  CHANGE:  REASON:

	Page 74
]	1 CERTIFICATE
2	2 I, RICHARD GERMOSEN, Fellow of the
3	3 Academy of Professional Reporters, stenographic New
4	4 Jersey Certified Court Reporter, New Jersey Certified
5	5 Realtime Court Reporter, California Certified
6	6 Shorthand Reporter, California Certified Realtime
7	Reporter, NCRA Registered Diplomate Reporter, and
8	8 NCRA Certified Realtime Reporter, do hereby certify:
9	9 That JASON HSUEH, the witness whose
10	O deposition is hereinbefore set forth, having been
11	duly sworn, and that such deposition is a true
12	2 record of the testimony of said witness.
13	I further certify that I am not related
14	4 to any of the parties to this action by blood or
15	5 marriage, and that I am in no way interested in the
16	6 outcome of this matter.
17	7 IN WITNESS WHEREOF, I have hereunto set
18	8 my hand this 15th day of November 2023.
19	$\mathcal{A}$
20	
	RICHARD GERMOSEN,
21	1 FAPR, RDR, CRR, CCR-NJ, CRCR, CSR-CA, CCRR-CA,
	NYACR, NYRCR
22	2 LICENSE NO. 30XI00184700
	LICENSE NO. 30XR00016800
23	3 California CSR No. 14391
	California CRR No. 198
24	4
25	5